

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of)
)
John Walsh) Art Unit: 3635
)
Serial No. **10/794,572**) Examiner: Jessica Laux
)
Filed: **March 11, 2004**) Confirmation No. 4803
)
Title: **METHOD OF FORMING A MOLDED**) Attorney Docket No: 16240.M293
 PLYWOOD DOOR SKIN, MOLDED)
 PLYWOOD DOOR SKIN AND DOOR)
 MANUFACTURED THEREWITH)

Mail Stop: Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

December 22, 2009

APPELLANT'S APPEAL BRIEF

Dear Sir:

Applicant/Appellant respectfully requests consideration of this brief on appeal filed pursuant to 37 C.F.R. § 41.37. This brief is accompanied by the fee set forth in § 41.20(b)(2).

A Notice of Appeal was filed on October 20, 2009. The two-month period for filing this appeal brief expires on December 22, 2009, the first operating business day following Sunday, December 20, 2009.

This Appeal responds to the July 20, 2009 final rejection of claims 1-14 and 27-33.

If a petition for extension or any additional fees are required or if the enclosed payment is insufficient, Appellant requests that this paper be accepted as a petition for extension, that the required fee(s) be charged to our Deposit Account No. 50-0548, and that the Commissioner notify the undersigned.

I. REAL PARTY IN INTEREST

The real party in interest is the Masonite Corporation by assignment recorded in the U.S. Patent & Trademark Office on July 21, 2004 and recorded at Reel 015591, Frame 0706.

II. RELATED APPEALS AND INTERFERENCES

There are no other prior and pending appeals, interferences or judicial proceedings known to Appellant, Appellant's legal representative, or assignee which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-14 and 27-33 are pending, stand rejected, and are being appealed. Claims 15-26 have been canceled.

IV. STATUS OF AMENDMENTS

No amendments are currently pending or have been filed subsequent to the final rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

A. Claim 1

Claim 1 is directed to a method of forming a molded plywood door skin. According to the method, a plywood board comprising at least one ply of solid wood is conditioned with water. (Specification, page 9, lines 11-14). The plywood board is then disposed in a mold press 26 having a contoured mold cavity. (Specification, page 10, lines 14-17; Figure 5). The

plywood board is then deformed in the mold press 26 using sufficient heat and pressure to form a molded plywood door skin D having a substantially uniform thickness and a substantially uniform density and contoured portions 20 corresponding to the mold cavity 26. (Specification, page 10, line 17 to page 11, line 9; Figure 3).

B. Claim 28

Claim 28 is directed to a method of forming a molded plywood door skin D. A plywood board comprising a plurality of solid wood plies bonded together is exposed to steam to condition the plywood board. (Specification, page 9, lines 11-14). The board is disposed in a mold press 26 having a contoured mold cavity. (Specification, page 10, lines 14-17; Figure 5). The board is then deformed in the mold press 26 using sufficient heat and pressure to form a molded plywood door skin D having a substantially uniform thickness and a substantially uniform density and contoured portions 20 corresponding to the mold cavity. (Specification, page 10, line 17 to page 11, line 9; Figure 3).

C. Claim 31

Claim 31 is directed to a method of forming a molded plywood door skin. A plywood board comprising a solid wood ply bonded to a lumber core is exposed to steam to condition the plywood board. (Specification, at page 9, lines 3-7, 11-14). The conditioned plywood board is disposed in a mold press 26 having a contoured mold cavity. (Specification, page 10, lines 14-17; Figure 5). The plywood board is deformed in the mold press 26 using sufficient heat and pressure to form a molded plywood door skin D having a substantially uniform thickness and a substantially uniform density and contoured portions 20 corresponding to the mold cavity. (Specification, page 10, line 17 to page 11, line 9; Figure 3).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Whether the Examiner correctly applied the law of obviousness in concluding that claims 1-14 and 27-33 are unpatentable under 35 U.S.C. § 103(a) over Moyes, U.S. Patent No. 6,312,540 (hereinafter “Moyes”) in view of Phillips, U.S. Patent No. 2,675,338 (hereinafter “Phillips”).

VII. ARGUMENT

Obviousness is a conclusion of law based on underlying findings of fact. *In re Gartside*, 203 F.3d 1305, 1316 (Fed. Cir. 2000). If the underlying findings of fact are erroneous, the legal conclusion cannot stand. “In rejecting claims under 35 U.S.C. § 103, the examiner bears the initial burden of presenting a *prima facie* case of obviousness. Only if that burden is met, does the burden of coming forward with evidence or argument shift to the applicant.” *In re Rijckaert*, 9 F.3d 1531, 1532 (Fed. Cir. 1993).

“It is to the claims which particularly point out what the inventor regards as his invention that one must look, and each claim must be considered separately.” *Stiftung v. Renishaw PLC*, 20 USPQ2d 1094, 1101 (Fed. Cir. 1991); see also *In re Beaver*, 13 USPQ2d 1409, (Fed. Cir. 1989).

Appellant asserts that the Examiner has inappropriately combined Moyes and Phillips and that claims 1-14 and 27-33 are patentable. The reasons for the patentability of each claim are set forth below.

A. Independent Claim 1 and Dependent Claims 2, 9, 10, 12, 13, and 27

1. A Prima Facie Showing Has Not Been Made to Justify Combination of the Art

The Examiner asserts that Moyes discloses a method of forming a molded door by conditioning the board with water or steam and deforming the board in the mold press using sufficient heat and pressure to form a molded door skin having contoured portions. *See Final Office Action*, July 20, 2009, page 2. The Examiner admits that Moyes does not expressly disclose a plywood board having at least one ply of solid wood, but asserts that Phillips discloses such a material. *Id.* at 3. The Examiner asserts that it would have been obvious to modify Moyes' process to substitute Phillip's plywood material:

at the time the invention was made it would have been obvious to one of ordinary skill in the art to try the molding process of Moyes on the board of Phillips (where Phillips is relied upon for the teaching of a plywood door skin that is capable of molded [sic] and not the specific molding process) to provide an improved molded door skin, *as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp.*

Id. at 4 (emphasis added).

"A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v Teleflex*, 550 U.S. 398, 418 (2007). In cases such as this, where a combination of references is presented, it is incumbent upon the examiner to identify an apparent reason that would have prompted a person of ordinary skill in the art to combine the references to meet the limitations presented in the claims. *KSR*, 550 U.S. at 418; *see Fresenius USA v. Baxter Int.*, 582 F.3d 1288, 1300 (Fed. Cir. 2009) (stating that it "remains appropriate for a post-KSR court considering obviousness 'to determine whether there was an apparent reason to combine the known elements in the fashion claimed.'"). "This is because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *KSR* at 418-19.

Applicant respectfully submits that the Examiner fails to make an adequate explicit analysis in order to support the obviousness rejection, as required by *KSR*. See *KSR*, 550 U.S. at 418 (stating that “[t]o facilitate review, this analysis should be made explicit”). The Examiner’s analysis consists of a conclusory statement that there was “good reason” for combining Moyes and Phillips. This unsupported conclusion does not meet the Examiner’s burden under *KSR*. If “good reason” was a sufficient technical explanation under Section 103, then all inventions could be found unpatentable without analysis. Such a result clearly was not anticipated or intended by the Supreme Court in *KSR*.

Additionally, Appellant respectfully submits that the Examiner has taken for granted that when faced with the problem of finding new and improved ways to mold plywood, the artisan of ordinary skill would have looked to all types of molding operations for solutions. Appellant respectfully submits that this assumption is incorrect. Plywood is a term having an ordinary and customary meaning to those skilled in the art. Plywood materials such as disclosed in Phillips represent wood products of distinct quality and substance. Plywood is made from thin sheets of solid wood called piles that are bound together. Each pile contains a high concentration of wood fibers which are relatively fixed.

On the other hand, the wood composite materials of Moyes contain wood fibers capable of relatively free flowing movement to conform to the mold as discussed throughout the specification. (See *Moyes*, column 1, lines 6-12, 20-26, 41-44, 55-59, 66-67; column 2, lines 10-18, 32-35, 42-46, 60-62; column 4, lines 2-6, 34-40, 46-49; column 5, lines 17-20, 42-44, 59-65; column 8, lines 10-13, 40-42).

A person of ordinary skill in the art would have understood the difference in the flow and molding properties between plywood and wood composites. In view of these evident

differences, the artisan of ordinary skill would not have had a reasonable expectation of success that the molding process of Moyes could be successfully applied to the plywood materials of Phillips. Moyes requires relatively flowable properties from its materials, whereas Phillips' materials lack this quality. "The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *KSR*, 550 U.S. at 416. Here, the results are not predictable because one of ordinary skill in the art, when viewing the Moyes reference as a whole, would predict that solid wood not composed of flowable fibers, such as plywood, would become cracked or otherwise damaged if used with the Moyes process, thereby negating the alleged "good reason" motivation relied upon by the Examiner. In cases such as this, where the use of a material not contemplated by the original method presents unpredictable results, no predictable results or resulting conclusions of obviousness can be found.

The Examiner asserts that Moyes does not restrict the wood material to wood composites because of the use of the term "preferably." *Final Office Action*, at 3. However, the word "preferably" does not open Moyes' disclosure up to a boundless interpretation that includes materials lacking common characteristics and mold properties to wood composites(e.g., plywood). The specification of Moyes as a whole makes clear that any variation of materials contemplated by Moyes is restricted to varieties of free-flowing wood composite materials such as medium density fiberboard or hardboard. *Moyes*, column 5, lines 58-62.

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2. One of Ordinary Skill in the Art Would Not Find a Likelihood of Success in Combining the References

Obviousness requires not only a reason to make the combination but also a reasonable expectation of success. *Procter & Gamble v. Teva*, 566 F.3d 989, 995 (Fed. Cir. 2009). A

number of the process parameters discussed in Moyes would have led one of ordinary skill in the art to believe that the plywood of Phillip would not have been successfully incorporated into the disclosed method of Moyes.

Moyes discloses adding conditioning resins such as melamine or urea formaldehyde before molding. The use of such resins with the plywood materials of Phillips would spoil the wood surface of the plywood. With a resin on the surface, the plywood could not be stained, and the aesthetics of the finished product would be adversely impacted. Additionally, Moyes discloses that these resin allow “the stretched or broken internal bonds, created when deforming the boards actually [sic] repairs these fibers and eventually reforms bonds stronger than were originally evident.” *Moyes*, column 4, lines 41-49. As discussed above, wood composites are formed of wood fibers capable of relatively free flowing movement. The molding process discussed in Moyes creates cracking in the board due to the separation of bonds between the fibers so that a conditioning resin is required to repair these cracks. Plywood, however, is formed of a solid wood material and does not contain free flowing fibers. Therefore, the resins disclosed in Moyes would not reform the bonds broken by the molding process when used with a plywood board and any cracks would be permanent.

Moyes also discloses a rate of closing the platens of the mold which would be much too fast if one were attempting to mold plywood. Moyes discloses that the speed of the molding process will be dependent on the hardness of the blank, but should be “*as little as 0.25mm per second.*” *Moyes*, column 8, lines 30-34; column 9, lines 22-27 (emphasis added). Moyes does not contemplate, teach, or suggest closure rates below this speed. One of ordinary skill in the art would understand that using plywood with the closure rate described in Moyes would result in fracturing and damage to the board.

Moyes also discloses that when the pressing operation is complete the platens should be held in place for about 10-60 seconds so that the wood fibers in the blank can continue to flow and achieve their final positions. *Moyes*, column 8, lines 36-40. As stated above, plywood does not have flowable fibers and would not be able to achieve this property. Therefore, one of ordinary skill in the art would think plywood unsuitable because the surface of a plywood board would be unable to achieve the final position of the mold.

Accordingly, one of ordinary skill in the art would not think there was a likelihood of success in using the method described in Moyes to mold plywood.

3. Moyes Teaches Away From Using Plywood

One of ordinary skill in the art would not think to combine Moyes with Phillips because the disclosure of Moyes teaches away from using a material that is not a wood composite. “A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In Re Gurley*, 27 F.3d 551 (Fed. Cir. 1994). Because of Moyes’s disclosure, one of ordinary skill in the art would either be discouraged from using the method described in Moyes to mold plywood or would be led down the divergent path of utilizing wood composite blanks instead of plywood.

As mentioned above, Moyes repeatedly discloses molding wood composite materials which contain wood fibers capable of flowing. *See Moyes*, column 1, lines 6-12, 20-26, 41-44, 55-59, 66-67; column 2, lines 10-18, 32-35, 42-46, 60-62; column 4, lines 2-6, 34-40, 46-49; column 5, lines 17-20, 42-44, 59-65; column 8, lines 10-13, 40-42. The field of the invention states that: “The disclosed invention is to a method for manufacturing a molded door skin from a solid flat wood composite material. . .” *Id.* at column 1, lines 6-8. The background discuss prior

hollow core doors made from composite materials which “may include particle board, flake board, hard board, and medium density fiberboard (‘MDF’).” *Id.* at column 1, lines 21-23. The summary of the invention makes repeated references to a “wood composite blank” and even goes as far to say that: “A primary object of the disclosed invention is a method of manufacturing a molded door skin from a flush wood composite blank . . .” *Id.* at column 2, lines 33-35; lines 43-44; lines 60-61. This terminology is repeated throughout the detailed description. *See Id.* at column 4, lines 2-6, 34-40, 46-49; column 5, lines 17-20, 42-44, 59-65; column 8, lines 10-13, 40-42. Even more, the term “wood composite” is present in every claim of the Moyes patent. This is not a mere disclosure of more than one alternative, but a repetitive emphasis on using only a wood composite material.

In similar cases, such repetitive description of a term throughout the specification has been found to limit the scope of the claims, even where the plain language of the claims could be given a broader interpretation. *See Microsoft Corp. v. Multi-Tech Sys.*, 357 F.3d 1340, 1346-48 (Fed. Cir. 2004). That approach should also be taken when ascertaining whether a reference teaches away from a claimed combination. Just as in determining claim scope, when determining if a reference would lead one of ordinary skill in the art down a divergent path, the specification as a whole should be considered. Because Moyes repeatedly teaches that the invention is for use with a wood composite, claims that the primary object of the invention is for use with a wood composite, discloses only different types of wood composites, provides process parameters suitable for use only with a wood composite, and recites the limitation of a wood composite in every claim, one of ordinary skill in the art would not think to use a solid wood material in following the path set forth in Moyes. This position is further advanced considering the difference in the properties of wood composites and plywood. What’s more, the process

parameters of Moyes, as discussed above, would further lead one of ordinary skill in the art to believe that the path set forth in Moyes was not intended for use with plywood and in fact would not be capable for use with plywood. Accordingly, Moyes teaches away from using the plywood material disclosed by Phillips, if not expressly then inherently.

In light of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 1 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests the reversal of the rejection to claim 1. Because claims 2, 9, 10, 12, 13, and 27 are dependent from claim 1, and because of the additional limitations set forth therein, Appellant requests the reversal of the rejections to these claims as well.

B. Claim 3

Claim 3 is dependent from claim 2. Appellant respectfully submits that the rejection to claim 3 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 3 further recites that the closure rate of the mold is between about 3 mm per minute and about 7 mm per minute. The Examiner has admitted that neither Moyes nor Phillips disclose a closure rate of this speed. *Final Office Action*, at 4. The Examiner, however asserts that the closure rate recited in claim 3 is "a matter of mere design choice . . ." *Id.* at 5.

In a paper published by the United States Patent and Trademark Office regarding formulating and communicating § 103 rejections the Patent Office states:

"A simple statement that a difference is a "design choice" or "lacks an advantage or unexpected result" is insufficient rationale to support a well written and legally sufficient rejection. These are conclusions, not statements of fact."

Business Method Patents – Formulating and Communicating 103 Rejections, section IV, United States Patent and Trademark Office, available at

<http://www.uspto.gov/patents/resources/methods/busmeth103rej.jsp#IIA>. Though this paper is directed to business methods, the requirements remain the same for all § 103 rejections. Here the Examiner has only provided conclusory statements of the alleged obviousness of “design choices,” and has not presented facts sufficient to satisfy the legal requirements for obviousness.

Next, the Examiner asserts that the closure rate claimed in claim 3 would have been obvious to one of ordinary skill in the art because Appellant “has not disclosed that such a closure [rate] provides an advantage, is used for a particular purpose, or solves a stated problem.” *Id.* The Examiner further states that one of ordinary skill in the art would have expected the closure rate of claim 3 and that described in Moyes to “perform equally well considering they both close the press at a constant predetermined rate.” *See* Final Office Action, p. 4.

Appellant respectfully submits that the Examiner does not have a full appreciation of the advantages of the invention as defined in claim 3. The Examiner’s conclusory statement fails to take into consideration the difference in properties between wood composites and plywood. The *minimum* closure rate of 15 mm per minute disclosed in Moyes would be much too fast to mold plywood. Neither Moyes nor Phillips discloses a closure rate suitable to mold plywood, nor do these references provide any motivation that would have led one of ordinary skill to discover an appropriate closure rate.

Even if the Examiner’s rejection was appropriate, which Appellant refutes, the closure rate recited in claim 3 provides the advantage of being able to mold plywood without it fracturing or otherwise damaging. This provides a clear advantage over the closure rates described in Moyes which would not be suitable for use with plywood.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 3 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests the reversal of the rejection to claim 3.

C. Claim 4

Claim 4 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 4 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 4 recites that the plywood board is steamed in an atmospheric chamber prior to molding. The Examiner states that this step is shown by Moyes at column 6, lines 59-61.

Final Office Action, at 5. Moyes, however, merely discloses:

“According to an alternative embodiment of this invention, steam may be directed at blank 10 at station 49 in order to add moisture to the flat solid blank.”

The above excerpt, as well as the remainder of Moyes, fail to discuss whether the board is steam treated under atmospheric conditions. Furthermore, the Examiner has failed to provide any reasons or facts, other than the mere conclusory statement that steaming boards is common, to show that it would have been obvious for one of ordinary skill in the art to utilize the method recited in claim 4. As discussed in further detail above, this rejection is improper because the Examiner has only provided conclusory statements, not presented facts sufficient to satisfy the legal requirements for obviousness.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claims 4 and 30 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 4.

D. Claim 5

Claim 5 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 5 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 5 recites that the plywood board is steamed in a pressurized chamber prior to molding.

The pressurized chamber recited in claim 5 provides a further advantage in that it allows moisture to soak into the plywood board at a rate faster than if an atmospheric chamber were used. This limitation is neither taught nor suggested by the cited references. Appellant respectfully submits that the Examiner has made no indication as to why one of ordinary skill in the art would think to use a pressurized chamber in steaming a plywood board.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 5 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 5.

E. Claim 6

Claim 6 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 6 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 6 further recites that the plywood board is steamed in a pressurized chamber for 30 minutes. The Examiner has rejected claim 6 as obvious by stating that Appellant "has not disclosed that such a limitation provides an advantage, is used for a particular purpose, or solves a stated problem." *Final Office Action*, at 5. The Examiner also concludes that this limitation is merely a design choice. *Id.* at 6. As discussed above with regard to claim 3, the Examiner has

only provided conclusory statements and not presented facts sufficient to satisfy the legal requirements for obviousness.

The Examiner also states that:

“One of ordinary skill in the art, furthermore, would have expected Moyes step of steaming, and applicant’s invention to perform equally well with either the step of steaming taught by Moyes or the claimed step of steaming because both steps would perform the same function of moisturizing the board to an acceptable moisture content equally well considering.”

Id. at 5. This is a mere conclusory statement that only considers the steaming step and not the length of time limitation disclosed in claim 6. The Examiner must show that the invention as claimed would have been obvious in view of the teachings disclosed by Moyes and Phillips. Reading steps from Appellant’s specification into the disclosure in Moyes is impermissible hindsight. Moyes makes only the one reference to steaming a wood composite board and does not teach or suggest any specific length of time. Therefore, one of ordinary skill in the art, when viewing the disclosure or Moyes and Phillips, would not have known the optimal time for steaming a plywood board in a pressure chamber to achieve the desired moisture content.

In view of the arguments above, Appellant respectfully submits that the Examiner’s rejection of claims 6 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant requests the reversal of the rejection to claim .

F. Claim 7

Claim 7 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 7 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 7 further recites that the plywood board is conditioned by soaking in a water bath. The Examiner claims that this limitation is taught by Moyes at column 6, lines 43-61. *Final*

Office Action, at 6. Moyes, however, makes no reference to soaking a board in a water bath prior to molding, either in the section quoted by the Examiner or in any other part of the specification. The Examiner provides no other basis or rational for the rejection. As discussed above, the analysis for obviousness must be made explicit. *KSR*, 550 U.S. at 418. Therefore, the Examiner's rejection is improper. Even if the rejection were proper, claim 7 remains patentable in light of the arguments made above in regards to claim 1, and because of the additional limitation.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 7 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant requests the reversal of the rejection to claim 7.

G. Claim 8

Claim 8 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 7 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 8 further recites that the plywood board is soaked in a water bath for 4 hours. Because Moyes fails to disclose a water bath as discussed above, and the Examiner has set forth no other support for this rejection in this regard, claim 8 is patentable for the same reasons as those of claim 7. Additionally, the added time limitation is not taught or suggested by the cited references.

Soaking the board for 4 hours is for the purpose of achieving an ideal moisture content (though other embodiments may also be effective). The Examiner, however, has stated that this limitation provides no advantage, is not used for a particular purpose, and solves no stated problem and that the limitation is a "mere design choice." *Final Office Action*, at 6. The

Examiner has further stated that one of ordinary skill in the art would have expected the “Moyes step of soaking, and applicant’s invention to perform equally well.” *Id.* Moyes, however, discloses no soaking step. Thus, the Examiner’s comments amount to conclusory statements and do not set forth facts sufficient to support the legal conclusion of obviousness.

In view of the arguments above, Appellant respectfully submits that the Examiner’s rejection of claim 8 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper.

Appellant respectfully requests reversal of the rejection to claim 8.

H. Claim 11

Claim 11 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 11 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 11 further recites that the conditioning of step increases the moisture content of the plywood board to between 10% and about 40%. The Examiner has rejected this claim based on the disclosure of Moyes which teaches that the moisture content of the board should be about 9-15%.

If plywood were used with the method described in Moyes, 9-15% moisture content is not sufficient to create the desired features either contemplated by Appellant’s claims or by the disclosure of Moyes. Using the plywood board disclosed in Phillips with the highest moisture content disclosed by Moyes would enable one of ordinary skill in the art to form only the most basic and slightest contours, certainly not the contours disclosed in Phillips or Moyes. If one attempted to mold the contours disclosed by the cited references, the plywood would certainly fracture.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 11 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 11.

I. Claim 14

Claim 14 is dependent from claim 1. Appellant respectfully submits that the rejection to claim 14 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 14 recites that the plywood board has an exterior ply of solid natural wood and at least one interior core layer selected from the group consisting of medium density fiberboard, chipboard, oriented strandboard, softboard, hardboard, and particle board. The Examiner has rejected claim 14 on the grounds that it would have been obvious to modify the board in Phillips to have a core as recited in claim 14 because "these are all common materials used in plywood and they are readily available and easily worked." *Final Office Action*, at 3.

This rejection, however, is based on conclusory statements and does not set forth facts sufficient to support the legal conclusion of obviousness. A plywood board having a solid wood exterior layer and a core layer consisting of one of the above materials has not been disclosed in the cited references. The Examiner has provided no factual basis for one of ordinary skill in the art to be motivated to modify the board disclosed in Phillips to meet the limitations of claim 14. Additionally, the Examiner has not set forth that one of ordinary skill in the art would know that such a board could be molded in the method recited in claim 1.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 14 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 14.

J. Independent Claim 28

The Examiner has rejected independent claim 28 as being obvious over Moyes in view of Phillips. The Examiner asserts that Moyes discloses a method of forming a molded door by conditioning the board with water or steam and deforming the board in the mold press using sufficient heat and pressure to form a molded door skin having contoured portions. *See Final Office Action*, page 2. . Appellant respectfully submits that the rejection to claim 28 should be reversed for all of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 28 is similar to claim 1, but includes the further limitation that the plywood board is conditioned by steam. This limitation further defines the conditioning process of the plywood board. Appellant requests the reversal of the rejection to claim 28.

K. Claim 29

Claim 29 is dependent from claim 28. Appellant respectfully submits that the rejection to claim 29 should be reversed for all of the reasons set forth above in Section VII.J., which is incorporated herein by reference, and for the following additional reasons.

Claim 29 recites the further limitation that the plywood board is steamed in a pressurized sealed cavity of at least about 30 minutes. The Examiner has rejected claim 29 as obvious by stating that Appellant “has not disclosed that such a limitation provides an advantage, is used for a particular purpose, or solves a stated problem.” *Final Office Action*, at 5. The Examiner also concludes that this limitation is merely a design choice. *Id.* at 6. In making this rejection, the Examiner has only provided conclusory statements and not presented facts sufficient to satisfy the legal requirements for obviousness.

This limitation is neither taught nor suggested by the cited references and the Examiner has made no indication as to why one of ordinary skill in the art would think to use a pressurized chamber for this length of time in steaming a plywood board.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 29 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 29.

L. Claim 30

Claim 30 is dependent from claim 28. Appellant respectfully submits that the rejection to claim 30 should be reversed for all of the reasons set forth above in Section VII.J., which is incorporated herein by reference, and for the following additional reasons.

Claim 30 further recites that the steaming of the plywood board is performed in an atmospheric chamber. The Examiner states that this step is shown by Moyes at column 6, lines 59-61. *Final Office Action*, at 5. As discussed above in section VII.D, in regard to claim 5, Moyes, fails to discuss whether the board is steam treated under atmospheric conditions. The Examiner has failed to provide any reasons or facts, other than the mere conclusory statement that steaming boards is common, to show that it would have been obvious for one of ordinary skill in the art to utilize the method recited in claim 4.

In view of the arguments above, Appellant respectfully submits that the Examiner's rejection of claim 30 under 35 U.S.C. § 103(a) over Moyes in view Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 30.

M. Claim 31

The Examiner has rejected independent claim 31 as being obvious over Moyes in view of Phillips. Appellant respectfully submits that the rejection to claim 31 should be reversed for all

of the reasons set forth above in Section VII.A., which is incorporated herein by reference, and for the following additional reasons.

Claim 31 is similar to claim 1, but includes the further limitation that the plywood board is conditioned by steam and that the plywood board comprises a solid wood ply bonded to a lumber core. The Examiner has admitted that Phillips does not expressly disclose the material of the core of the board, but maintains that claim 31 would still be obvious because the materials recited in the claim “are all common materials used in plywood and they are readily available and easily worked.” *Final Office Action*, page 3. In support of this conclusion, the Examiner points to the Appellant’s specification at page 2, line 18 and page 3, lines 1-10. *Id.* These portions of the specification discuss how plywood surface layers may be bonded to a composite core or piles of lower value wood. This however does not render the entire claim obvious because there is no discussion of how such materials would be suited for molding. In fact, this section goes on to discuss how traditional methods of molding wood composite materials are not suitable for boards containing a solid wood layer such as plywood. *See* Specification, page 5, line 22 to page 6, line 20. Thus, one of ordinary skill in the art would not think it obvious to use the material recited in the claim with the process disclosed in Moyes.

In view of the arguments above, Appellant respectfully submits that the Examiner’s rejection of claim 31 under 35 U.S.C. § 103(a) over Moyes in view of Phillips is improper. Appellant respectfully requests reversal of the rejection to claim 31.

N. Claim 32

Claim 32 is dependent from claim 31. Appellant respectfully submits that the rejection to claim 32 should be reversed for all of the reasons set forth above in Section VII.M., which is incorporated herein by reference, and for the following additional reasons.

Claim 32 recites the further limitation that the board is steamed in a pressurized chamber for at least about 30 minutes. The Examiner has rejected claim 32 on the same grounds as presented in section VII.K. Accordingly claim 32 is patentable for the additional reasons set for in section VII.K, which is incorporated herein by reference. Appellant respectfully requests reversal of the rejection to claim 32.

O. Claim 33

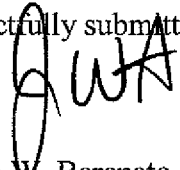
Claim 33 is dependent from claim 31. Appellant respectfully submits that the rejection to claim 33 should be reversed for all of the reasons set forth above in Section VII.M., which is incorporated herein by reference, and for the following additional reasons.

Claim 33 recites the further limitation that the board is steamed in an atmospheric chamber. The Examiner has rejected claim 33 on the same grounds as presented in section VII.L. Accordingly claim 33 is patentable for the additional reasons set for in section VII.L, which is incorporated herein by reference. Appellant respectfully requests reversal of the rejection to claim 33.

VIII. CONCLUSION

For the reasons given above, pending claims 1-14 and 27-33 are allowable and reversal of the Examiner's rejections are respectfully requested.

Respectfully submitted,



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CLAIMS APPENDIX

1. A method of forming a molded plywood door skin, comprising:

conditioning a plywood board comprising at least one ply of solid wood with water;

disposing the conditioned plywood board in a mold press having a contoured mold cavity; and

deforming the plywood board in the mold press using sufficient heat and pressure to form a molded plywood door skin having a substantially uniform thickness and a substantially uniform density and contoured portions corresponding to said mold cavity.
2. The method of claim 1, further comprising closing the mold press at a predetermined closure rate.
3. The method of claim 2, wherein the predetermined closure rate is between about 3 mm per minute and about 7 mm per minute.
4. The method of claim 1, wherein said conditioning of the plywood board comprises exposing the plywood board to steam in an atmospheric chamber.

5. The method of claim 1, wherein said conditioning of the plywood board comprises exposing the plywood board to steam in a pressurized, sealed cavity.
6. The method of claim 5, wherein the plywood board is exposed to steam in the pressurized, sealed cavity for at least about 30 minutes during said conditioning.
7. The method of claim 1, wherein said conditioning of the plywood board comprises soaking the plywood board in a water bath.
8. The method of claim 7, wherein said conditioning of the plywood board comprises soaking the plywood board in the water bath for at least about 4 hours.
9. The method of claim 1, wherein said conditioning of the plywood board comprises exposing the plywood board to a surface spray.
10. The method of claim 9, wherein said conditioning further comprises treating the plywood board with surfactants to achieve a desired moisture pick-up.

11. The method of claim 1, wherein said conditioning of the plywood board increases moisture content of the plywood board to between about 10% and about 40%.

12. The method of claim 1, wherein the plywood board is a luan plywood board.

13. The method of claim 1, wherein the plywood board includes an exterior ply of solid natural wood, and at least one interior core layer.

14. The method of claim 13, wherein the interior core layer is selected from the group consisting of medium density fiberboard, chipboard, oriented strandboard, softboard, hardboard, and particleboard.

15-26. Canceled

27. The method of claim 1, wherein the plywood board is free of a non-solid mat of wood material.

28. A method of forming a molded plywood door skin, comprising the steps of:

exposing a plywood board to steam to condition the plywood board, the plywood board comprising a plurality of solid wood plies bonded together;

disposing the conditioned plywood board in a mold press having a contoured mold cavity; and

deforming the plywood board in the mold press using sufficient heat and pressure to form a molded plywood door skin having a substantially uniform thickness and a substantially uniform density and contoured portions corresponding to said mold cavity.

29. The method of claim 28, wherein said exposing the plywood board to steam is performed in a pressurized, sealed cavity for at least about 30 minutes.

30. The method of claim 28, wherein said exposing is performed in an atmospheric chamber.

31. A method of forming a molded plywood door skin, comprising the steps of:

exposing a plywood board to steam to condition the plywood board, the plywood board comprising a solid wood ply bonded to a lumber core;

disposing the conditioned plywood board in a mold press having a contoured mold cavity; and

deforming the plywood board in the mold press using sufficient heat and pressure to form a molded plywood door skin having a substantially uniform thickness and a substantially uniform density and contoured portions corresponding to said mold cavity.

32. The method of claim 31, wherein said exposing the plywood board to steam is performed in a pressurized, sealed cavity for at least about 30 minutes.

33. The method of claim 31, wherein said exposing is performed in an atmospheric chamber.

EVIDENCE APPENDIX

[There is no evidence being relied upon by appellant in this appeal.]

RELATED PROCEEDINGS APPENDIX

There are no decisions regarding related proceedings for submission in the related proceedings appendix.